

## THREE NOTEWORTHY COLUBRIDS FROM SOUTHERN SONORA, MEXICO

Max A. Nickerson and H. L. Heringhi<sup>1</sup>

Two separate collections of amphibians and reptiles were made by private collectors during the summers of 1964 and 1966 in and around Alamos, Sonora, Mexico. These collections are deposited in the herpetological collection of Arizona State University (ASU). This report concerns three rare species of colubrids from these collections.

### *Dryadophis cliftoni* Hardy

This snake was originally described as *Dryadophis fasciatus* Hardy, 1963 (Copeia, 669-672). This name was found to be pre-occupied and was replaced by *Dryadophis cliftoni* Hardy, 1964 (Copeia, 714). A single, adult female (ASU 5848) was taken near the Anna Maria Mine, approximately 20 miles east of Alamos, near the Sonora-Chihuahua border, between August 1-15, 1964. This is the fifth specimen reported and the first from Sonora. It represents an extension of the range about 325 miles NNW from Plumasas, Sinaloa, Mexico.

This specimen differs from those described by Hardy (1963) as follows: infralabials 10-11, most previously 10-10; the dorsal surface of the head is tan from the parietals anterior, whereas in others only the top of the head anterior to eyes was tan; and 32 dark dorsal blotches (which become lighter anteriorly), less than the 40-46 recorded.

### *Sonora aemula* Cope

All five specimens were collected within the city limits of Alamos except ASU 6458, which was taken a short distance south of Alamos. Two males (ASU 5850, 5851) were collected in July, 1964, and two females (ASU 6611, 6612) and one male (ASU 6458) in July, 1966. They ranged in size from a total length of 242 mm. and 35 mm. tail length (ASU 6612) to 365 mm. total length and 58 mm. tail length (ASU 5850). This brings the known number of specimens to ten.

None of the five snakes showed the same dorsal or ventral pattern. Zweifel and Norris (1955) state that body color pattern is variable and shows little consistency in the arrangement of the red, black, and white rings. (Fig. 1 shows the diversity encountered.) Such a polychromatic condition is difficult to interpret. Zweifel and Norris (*op. cit.*) state that in the specimens they studied each red scale (dorsal assumed) was centered with black. In the ASU specimens some of the dorsal scales approaching the venter lose the black pigmentation, also the black is not always centered on the scale.

<sup>1</sup> Department of Zoology, Arizona State University, Tempe, Arizona.

## SCUTELLATION AND SIZE IN THREE SPECIES OF SONORAN COLUBRIDS

	Dorsals	Ventrals	Caudals	Supra-labials	Infra-labials	Pre-oculars	Post-oculars	Lorals	Temporals	Total Length	Tail Length
ASU 5848 <i>D. cliftoni</i> f.	17-17-15	192	146	8/8	10/11	1/1	2/2	1/1	2-2-3/ 3-2-2	1395mm	470mm
ASU 5850 <i>S. aemula</i> m.	15-15-15	146	40	7/7	8/8	1/1	2/2	1/1	1-2/1-2	365mm	58mm
ASU 5851 m.	15-15-15	149	41	7/7	7/7	1/1	2/2	1/1	1-2/1-2-2 <sup>1</sup>	308mm	53mm
ASU 6458 m.	16-15-15	144	21*	7/7	8/8	1/1	2/2	0/0	1-2/1-2	282mm*	28mm*
ASU 6611 f.	16-15-15	162	35	7/7	7/7	1/1	2/2	1/1	1-2/1-2	323mm	44mm
ASU 6612 f.	16-15-15	160	38	7/7	8/7	1/1	2/2	1/1	1-2/1-2 <sup>1</sup>	242mm	35mm
ASU 5849 <i>S. lippiens</i> m.	19-19-19	214	20	6/6	7/7	1/1	1/1	0/0	1-3-3/ 1-2-3	380mm	26mm
ASU 6634 m.	19-19-19	213	22	5/5	7/6	1/1	1/1	0/0	1-3-3/ 1-3-3	388mm	33mm

\* Part of tail missing.

<sup>1</sup> These specimens tend toward a third row of temporals on the left.

One specimen (ASU 6612) is devoid of any bands or rings on the dorsum of the body and has lost the black band which borders the posterior margin of the white nuchal band (characteristic of all of the other specimens). One specimen (ASU 6611) is devoid of bands or rings for the first third of its length. Zweifel and Norris (*op.cit.*) report one female (MVZ 50746) and Bogert and Oliver (1945), one male (AMNH 63738) as having lost the banded pattern anteriorly. The dorsal pattern of this series, except ASU 6612, consists of a series of triads either white-black-white or black-white-black on a red ground color. Apparently on three specimens (ASU 5850, 6458, 6611) the black spots (usually centered on each scale) have fused to form black bands on both sides of what would be a white-black-white triad converting this to a five-banded sequence black-white-black-white-black. The other alternative being that two triads may have fused, losing one band in the process. The number of the five-banded sequences varied from zero to three.

The triads of an individual may all be black-white-black at ASU 5851, or white-black-white (except those fused) as ASU 6458, or change from one to the other as ASU 5850. The number of body triads (counting the aberrant bandings as one) varies from zero to ten. Zweifel and Norris (*op. cit.*) mention red rings on two specimens; however, only ASU 5850 had red crossing the venter to form rings. In this specimen all bands—black, white, and red (except anteriorly)—cross the venter to form rings. In the remaining specimens in the Arizona State University collection the venter is white with only the black crossing it to form rings. However, on the tail the red extends down to produce a red ventral surface with black and white rings. One specimen (ASU 6612) has an immaculate venter except for a black and white ring at the tip of the tail.

### *Sympholis lippiens rectilimbus* Hensley

An adult male (ASU 5849) was taken on the road between Los Trincheros and Alamos (14 mi. W. of Alamos on the Alamos-Navajoa road) between June 27 and July 10, 1964 (10:00 p.m.-1:30 a.m.). Another adult male (ASU 6634) was taken 10 mi. W. of Alamos August 6, 1966, 11:00 p.m.

According to Hensley (1966), this subspecies differs from *S. l. lippiens* principally in shape and position of nuchal band, ventral pattern details, and head scutellation. He describes *S. l. rectilimbus* as having a straight margin on the anterior border of the white nuchal collar, a dark blotch or wide line in each interspace on the venter (at midline), narrower interspaces between the body bands than *S. l. lippiens*, only the third supralabial entering the orbit, and loreals often reduced or absent. Both specimens (ASU 5849, 6634) agree with the last three characteristics but not with the first two. The anterior border of the white nuchal band of ASU 5849 projects caudad forming a V. On ASU 6634 it makes a looplike extension cephalad similar to *S. l. lippiens*, although not as pronounced as Hensley (*op. cit.*, Fig. 2B, p. 51) illustrates.

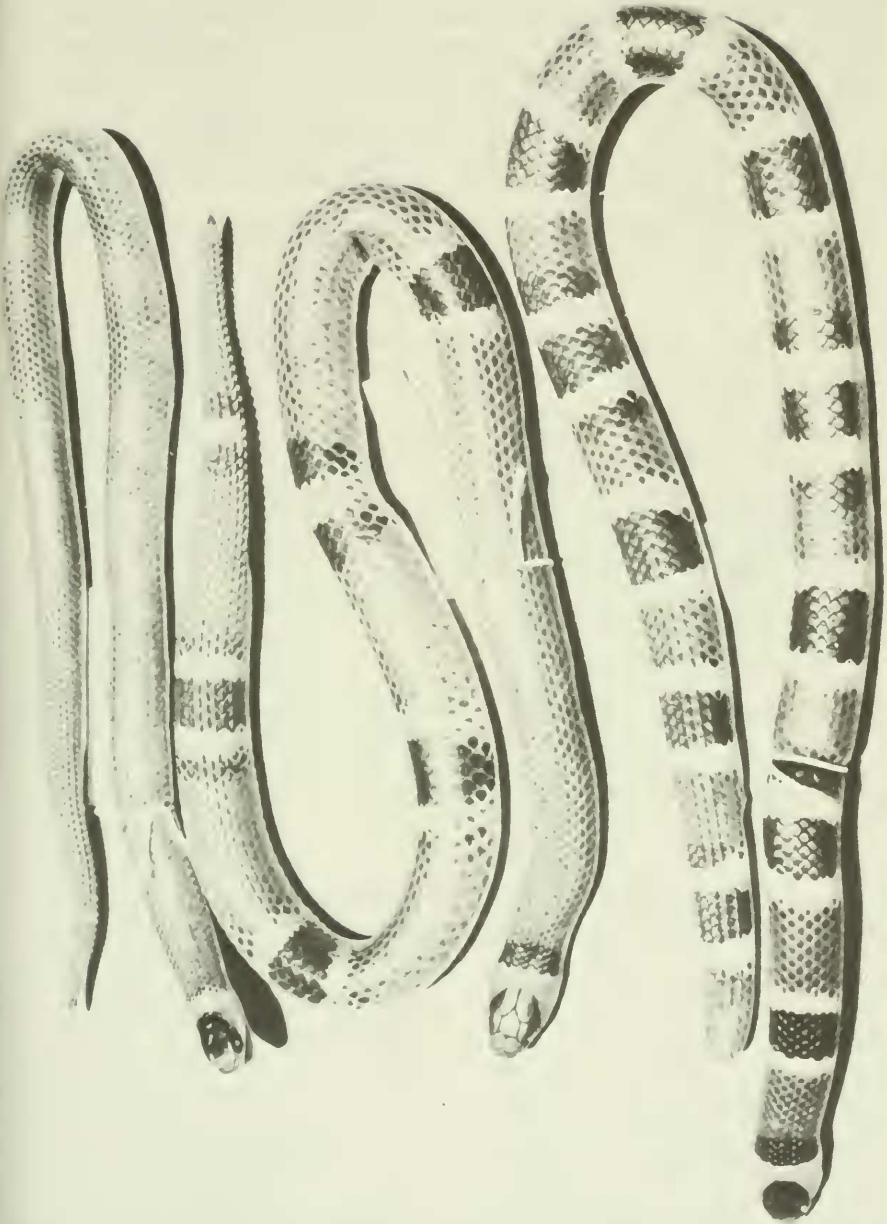


Figure 1. Variability in dorsal pattern of *Sonora aemula*. Top to bottom ASU 6612, 6611, 6458.

Furthermore, the ventral pattern of both snakes has a closer resemblance to *S. l. lippiens* than *S. l. rectilimbus* (Hensley, *op. cit.*, Fig. 2 G&H, p. 51). The interspaces on ASU 5849 are nearly immaculate, whereas on ASU 6634 some interspaces are diffusely pigmented. More specimens should be examined to evaluate these characters and the validity of this subspecies.

Our thanks go to the following for their contributions: Dr. W. L. Minckley, Dr. M. J. Fouquette, Jr., Milton Lieberman, John Sloan, Stan Williams, Pat Martino, Rene Martinez De Castro, and Luis Carlos Felix.

Some funds supporting this study were received from Arizona State University.

#### LITERATURE CITED

- BOGERT, CHARLES M., AND JAMES A. OLIVER. 1945. A preliminary analysis of the herpetofauna of Sonora. *Bull. Amer. Mus. Nat. Hist.*, 83:301-425; plates 37.
- HARDY, LAURENCE M. 1963. Description of a new species of snake (Genus *Dryadophis*) from Mexico. *Copeia*, 1963(4):669-672.
- . 1964. A replacement name for *Dryadophis fasciatus* Hardy. *Copeia*, 1964(4):714.
- HENSLEY, M. MAX. 1966. A new subspecies of the Mexican snake, *Sympholis lippiens* Cope. *Herp.*, 22(1):48-55; 2 figs.
- ZWEIFEL, RICHARD G., AND KENNETH S. NORRIS. 1955. Contribution to the herpetology of Sonora, Mexico. *Amer. Mid. Nat.*, 54(1):230-249.